A NEW SPECIES OF *NEPALOMYIA* FROM INDONESIA (DIPTERA: DOLICHOPODIDAE)'

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ABSTRACT: *Nepalomyia baliensis*, sp. nov. from Indonesia is described as new to science which represents the southernmost distribution range of the genus in Asia. Diagnostic features are discussed. Due to the recent synonymy of *Neurigonella* with *Nepalomyia*, the following new combinations are proposed: *Nepalomyia nepalensis* (Yang, Saigusa and Manusuga, 2003) comb. nov. and *Nepalomyia nigra* (Yang, Saigusa and Manusuga, 2003) comb. nov.

KEY WORDS: Diptera, Dolichopodidae, Nepalomyia, new species, Indonesia.

The peloropeodine genus *Neugrigonella* Robinson, 1964 has recently been synonymized with *Nepalomyia* Hollis, 1964 by Runyon and Hurley (2003). It is characterized by an arista arising from the apical concavity of the first flagel-lomere and a first tarsomere of leg III with one basal spur on the inner surface directed upward. *Nepalomyia* is represented by 4 species in the Nearctic Region (Runyon and Hurley, 2003) and 1 species in the Far East of Russia (Palaearctic: Negrobov, 1991). Until the mid-1970s, no species have been recorded from the Oriental Region before (Dyte, 1975). Recently 20 species were reported from China by Yang and Saigusa (2001a, b), and 4 species of *Nepalomyia* is described from Indonesia for the first time which represents the southernmost distribution range of the genus in Asia.

The following abbreviations are used: acr-acrostichal, ad-anterodorsal, ap-apical, dc-dorsocentral, LI-fore leg, LII-mid leg, LIII-hind leg, MSSC-male secondary sexual character, oc-ocellar, pd-posterodorsal, v-ventral.

Nepalomyia baliensis, NEW SPECIES (Figs. 1-3)

Diagnosis: Belonging to *N. henanensis* species group. First flagellomere nearly trapezoidal, 0.9 times as long as wide, with weak lower apical corner. Coxae dark brown. Male fore tarsomeres 1-3 with one row of long posterior hairs (MSSC). Male cercus without distinct basal tubercle.

Description: Male: Body length 2.6-2.7 mm, wing length 3.1-3.3 mm.

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Head dark metallic green with gray brown pollen; face with pale gray pollen. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Ocellar tubercle weakly raised, with 2 strong oc and 2 short posterior hairs. Antenna (Fig. 1) black; first flagellomere nearly trapezoidal, 0.9 times as long as wide, with weak lower apical corner; arista black, long, with rather short basal segment. Proboscis black with black hairs; palpus black with black hairs and 1 black apical bristle.

Thorax dark metallic green with gray brown pollen; pleuron with pale gray pollen. Hairs and bristles on thorax black; 5 strong dc, 6 irregularly paired acr; scutellum with 2 pairs of bristles, outer pair weak and nearly 1/4 as long as inner pair. Propleuron with 2 black hairs and 1 black bristle on lower portion. Legs brownish yellow; coxae dark brown; tarsi brown to dark brown from tip of tarsomere 1 onward. Hairs and bristles on legs black; coxa 1 with 5-6 bristles, coxa 11 with 1 anterior bristle, coxa 111 with 1 outer bristle. Femora 11 and 111 with 1 preapical ad. Tibia I apically with 2 bristles; tibia 11 with 2 ad, 2 pd and 1 v, apically with 4 bristles; tibia 111 with 2 ad and 3 pd, apically with 3 bristles. First three tarsomeres of leg 1 with one row of long posterior hairs (MSSC). First tarsomere of leg 111 with 1 v at base. Relative lengths of tibia and 5 tarsomeres L1 1.8 : 1.2 : 0.5 : 0.35 : 0.35 : 0.35; L1I 2.6 : 1.5 : 0.9 : 0.8 : 0.5 : 0.35 : 0.35. L1I 2.6 : 1.5 : 0.9 : 0.8 : 0.5 : 0.35. L1II 3.1 : 0.65 : 1.2 : 0.9 : 0.6 : 0.3. Wing hyaline; veins dark brown, basal costal section before h slightly thickened, R4+5 and M parallel apically; CuAx ratio 0.35. Squama dark yellow with dark brown margin, with black hairs. Halter yellow with dark brown knob.

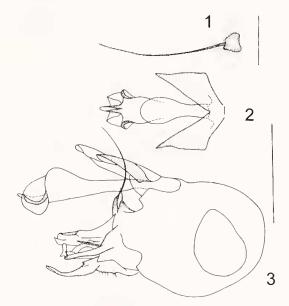
Abdomen dark brown with gray brown pollen. Hairs and bristles on abdomen black; tergites 1-5 each with one row of posterior bristles.

Male genitalia (Figs. 2-3): Surstylus on epandrium with thick dorsal lobe nearly straight, and thin ventral lobe weak curved (which bears 1 long thin process at base); cercus basally with 6-7 short hairs, but without distinct tubercle; hypandrium deeply incised into two lateral portions nearly triangular; aedeagus nearly straight and distinctly swollen apically, with mid-ventral process large and rounded apically.

Female: Body length 2.6-3.0 mm, wing length 3.0-3.3 mm.

Type Data: Holotype, male, Indonesia, Bali Is., Botanical Garden (1300 m), 4. x. 2000, T. Tachi (deposited in the collection of the Biosystematics Laboratory of Kyushu University, Fukuoka). Paratypes: 13 males 30 females, same data and depository as holotype.

Etymology: The name refers to the type locality Bali.



Figs. 1-3. *Nepalomyia baliensis, n.* sp. (male). 1, Antenna (excluding scape and pedicel); 2, hypandrium and aedeagus, ventral view; 3. hypopygium, lateral view. Scale 0.25 mm.

DISCUSSION

The new species is somewhat similar to *Nepalomyia pallipilosa* (Yang and Saigusa) from Yunnan in the shape of aedeagus, but may be separated from the latter by a longer first flagellomere (vs. 0.6 as long as wide in *pallipilosa*), R4+5 and M being parallel at wing apex (vs. convergent at wing apex), and tarsus 1 brown to dark brown from tip of tarsomere 1 onward (vs. tarsus I partly white) (Yang and Saigusa, 2001b).

Due to the synonymization of *Neurigonella* Robinson, 1964 with *Nepalomyia* Hollis, the recently described species are proposed as new combinations: *Nepalomyia nepalensis* (Yang, Saigusa and Manusuga, 2003) comb. nov. and *Nepalomyia nigra* (Yang, Saigusa and Manusuga, 2003) comb. nov.

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LITERATURE CITED

- Dyte, D. E. 1975. Family Dolichopodidae, pp. 212-258. *In*, Delfinado, M. D. and D. E. Hardy (Editors). A catalog of the Diptera of the Oriental region, Volume 2. The University Press of Hawaii, Honolulu. 459 pp.
- Hollis, D. 1964. On the Diptera of Nepal (Stratiomyidae, Therevidae and Dolichopodidae). Bulletin of the British Museum (Natural History) Entomology 15(4):83-116.
- Negrobov, O. P. 1984. The genera of the family Dolichopodidae (Diptera), new for the faunas of Palearctic and USSR. Zoologickie Zhurnal 63:1111-1115.
- Negrobov, O. P. 1991. Family Dolichopodidae. pp. 11-139. *In*, Soos, A. and Papp, L. (Editors). Catalogue of Palaearctic Diptera, Volume 7. Akadémiai Kiadó, Budapest. 291 pp.
- **Robinson, H.** 1964. A synopsis of the Dolichopodidae (Diptera) of the southeastern United States and adjacent regions. Miscellaneous Publications of the Entomological Society of America 4: 103-192.
- Robinson, H. and J. R. Vockeroth. 1981. Dolichopodidae. pp. 625-639. *In:* McAlpine, J. F. *et al.* (coords.), Manual of Nearetic Diptera, Volume 1. Research Branch, Agriculture Canada Monograph, No. 27. 674 pp.
- Runyon, J. B. and R. L. Hurley. 2003. Revision of the Nearetic species of *Nepalomyia* Hollis (= *Neurigonella* Robinson) (Diptera: Dolichopodidae: Peloropeodinae) with a world catalogue. Annals of the Entomological Society of America 96(4):403-414.
- Yang, D. and T. Saigusa. 2001a. The species of *Neurigonella* from China (Diptera: Empidoidea: Dolichopodidae). Annales de la Société entomologique de France (N.S.) 37:375-392.
- Yang, D. and T. Saigusa. 2001b. New and little known species of Dolichopodidae from China (X1). Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Entomologie 71:237-256.
- Yang, D., T. Saigusa, and K. Masunaga. 2003. A review of the genus *Neurigonella* from Nepal (Diptera: Empidoidea: Dolichopodidae). Annales Zoologici 53(4):663-665.